



Surge Protection Generator Load Shedding

Power Solutions for Every Application
Industrial | Commercial | Residential



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PSP Surge Protection Devices

For 25 years PSP has been providing superior products for the surge protection markets. Over the last five years we have developed state of the art load management systems for residential and commercial applications.

All of PSP's Surge Protection Devices are designed, tested and built to deliver consistent and superior performance for decades. In addition to excellent performance, function and protection, they also carry some of the best warranties in the industry. The unique, hybrid design allows these units to perform as well as new, even after years in extreme power and environmental conditions.

Vortex™ Series A

The new Vortexx “Series A” devices are designed and built to combine excellent performance, a space saving and flexible design and serious cost efficiency. Available in either single phase/single pole (L-N-G) configurations of 120 VAC, 240-277 VAC and 480 VAC, or a double pole version configuration of 120/240 VAC (L-G) which is UL 1449 5th edition listed. These units are an excellent choice for UL508 panels. They can be built into any UL certified device.

FEATURES

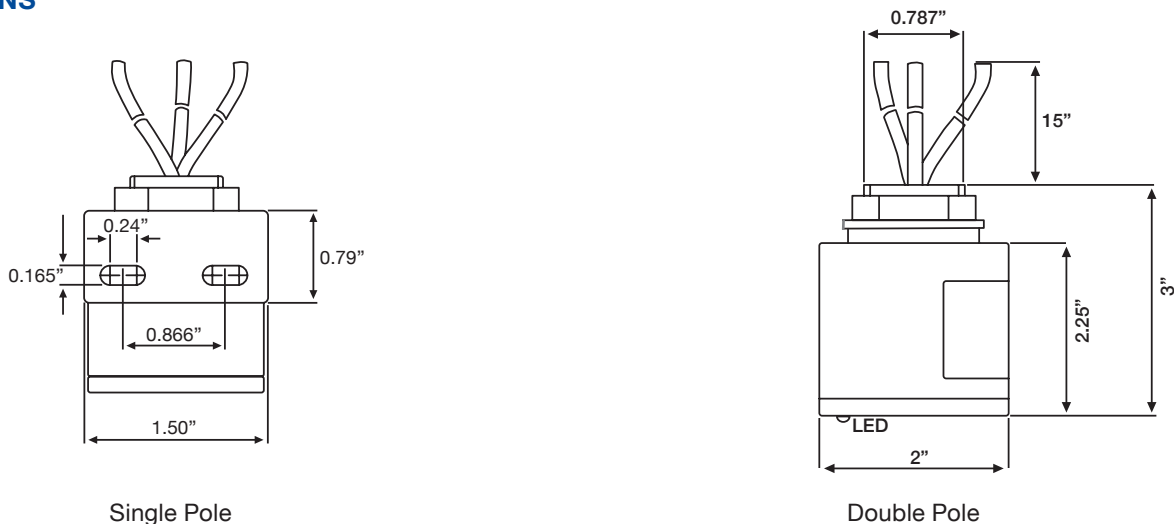
- Small footprint
- Nipple mount or bracket mount installation
- I_{max}: 50 kA
- I_n: 10 kA
- SCCR: 100kAIC
- Thermally fused metal oxide varistor suppression
- Single pole is a UL recognized component
- Double pole is a UL 1449 5th edition listed component
- NEMA 4X indoor/outdoor enclosure
- LED diagnostic indicator
- 25 year warranty



Single Pole
VA1S-050-4XP
VA4S-050-4XP
VA5S-050-4XP

Double Pole
VA1-050-4XP

DIMENSIONS



Vortex™ Series B

Main panel, subpanel and point of use applications up to 200 KAIC fault current rating. Status LED. 60,000 or 100,000 surge amps available. NEMA 4X (IP65) indoor/outdoor rated enclosure.

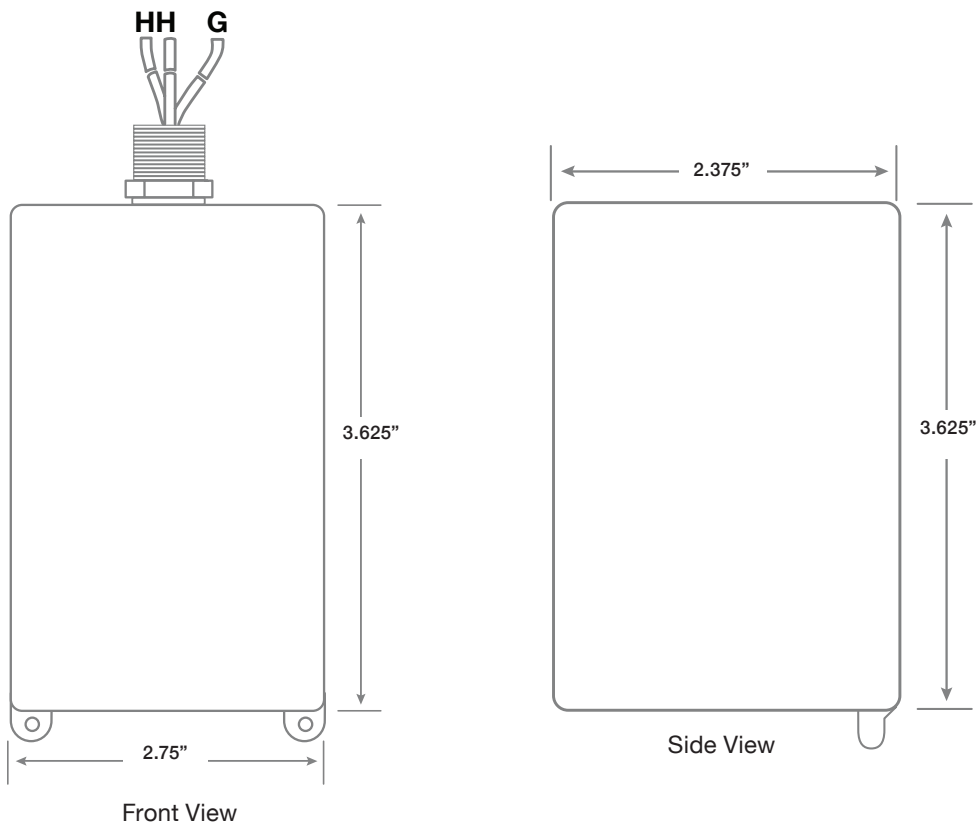
FEATURES

- UL 1449 5th Edition, Type 1
- I_{max}: 60 kA or 100 kA per phase
- Thermally fused metal oxide varistor suppression with added Gas Tube technology
- Real-time per phase LED indicators and audible alarm
- NEMA 4X (IP66) indoor/outdoor rated enclosure
- In: 20 kA
- Short Circuit Current Rating (SCCR) 200 kAIC
- #12 AWG lead length: 18"
- Designed to allow installation inside of electrical box
- Lifetime warranty
- Flush mount option



VB1-60-4XP
VB1-100-4XP

DIMENSIONS



Vortex™ Series R

Main panel, subpanel and point of use applications up to 200 KAIC fault current rating. Status LED with audible alarm. 120,000 surge Amps available in all single and three phase. NEMA 4X (IP65/IP66) indoor/outdoor rated enclosure.

FEATURES

- UL 1449 5th edition Type 1 UL/cUL listed
- I_{max}: 120 kA per phase
- Thermally fused metal oxide varistor suppression with added gas-tube technology
- LED indicator and audible alarm
- NEMA 4X (IP65/IP66) indoor/outdoor rated enclosure
- In: 20 kA
- EMI/RFI noise filtration (-40db)
- Repositionable lid allows for label orientation
- Short circuit current rating (SCCR) 200 kAIC
- Lead length: 36" / #10 AWG
- Meets UL 96A lightning protection master label
- Lifetime warranty: single phase
- 25 year warranty: 3-phase

ADD-ON ITEMS

- Mounting bracket to allow installation inside of electrical panel
- Flush mount cover

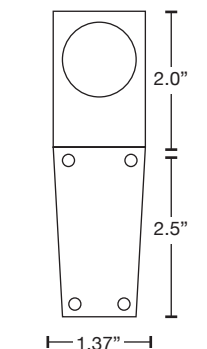
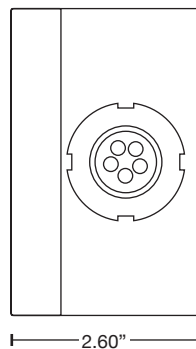
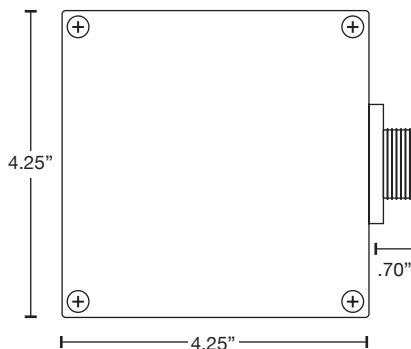


VR-120
Single-Phase & Three Phase

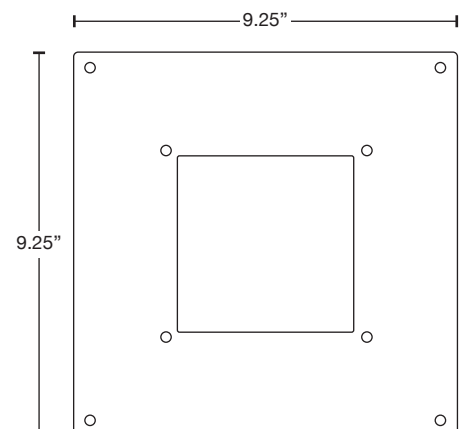


VR-GEN

DIMENSIONS



Mounting Bracket



Flush Mount Cover

PART NUMBER BREAKDOWN

VR(X)-120-4XM

● **Surge Rating: 120** =120 kA/phase

● **Voltage Identifier:** 1=120/240 single phase, 2=120/208 3-phase Wye, 3=120/120/240 3-phase Hi-Leg Delta, 4=277/480 3-phase Wye, 5=480 3-phase Delta, 6=347/600 3-phase Wye, 7=600 3-phase Delta, 8=220/380 3-phase Wye, 9=240 3-phase Delta

SPECIFICATIONS

Description		VR-GEN	VR1	VR2	VR3	VR4	VR5	VR6	VR7	VR8	VR9	
System Voltage	VAC	120/240	120/240	120/208	120/120/240	277/480	480	347/600	600	220/380	240	
System Wiring		3W+G (Single Phase)	3W+G (Single Phase)	4W+G (3-Phase Wye)	4W+G (3-Phase Hi-Leg Delta)	4W+G (3-Phase Wye)	3W+G (3-Phase Delta)	4W+G (3-Phase Wye)	3W+G (3-Phase Delta)	4W+G (3-Phase Wye)	3W+G (3-Phase Delta)	
Maximum Operating Voltage	MCOV	L-N	150	150	150	150/300	320	N/A	550	N/A	320	N/A
		N-G	150	150	150	150/300	320	N/A	550	N/A	320	N/A
		L-G	150	150	150	150	320	550	550	750	320	320
		L-L	300	300	300	300/300	520	550	750	750	550	640
Voltage Protection Rating	VPR	L-N	700	700	700	700/1,200	1,200	N/A	1,800	N/A	1,200	N/A
		N-G	700	700	700	700/1,200	1,000	N/A	1,800	N/A	1,200	N/A
		L-G	700	700	700	700/1,200	1,200	1,800	1,800	1,800	1,000	1,200
		L-L	1,000	1,000	1,000	1,800/1,800	2,500	3,000	3,000	2,000	1,800	1,800
Operating Current	Ic	<10 mA	<10 mA	<10 mA	<30 mA	<10 mA	<30 mA	<10 mA	<30 mA	<10 mA	<30 mA	
Follow Current	If	None										
Maximum Leakage Current	Ipe	1 mA										
Frequency	f	50/60/400 Hz										
Nominal Discharge Current Per Mode	In (8/20 μs)	20 kA										
Maximum Discharge Current Per Phase	I _{max} (8/20 μs)	120 kA per Phase										
Short Circuit Current Rating	SCCR	200 kA										
Standard's Compliance or Recognition		UL 1449 5th Edition Type 1 listed, cUL Listed										
EMI/RFI Filtering		1283 Electromagnetic Interference Filter (-40 dB)										
Thermal Disconnecter		Internal to Each Component										
Overload Disconnecter		Internal to Each Device										
Failure Indicators		LED & Audible Alarm										
Operating Temperature		-40 to +185°F (-40 to +85°C)										
Housing-Enclosure Material		NEMA 4X Aluminum										
Mounting Type		Nipple/Wall Mounting --- Bracket Mount (Not Included) or Flush Mount (Cover Not Included)										
Environmental Rating		NEMA 4, IP65, IP66										
Installation Location		Indoor/Outdoor										

Vortex™ Series C

The Vortex™ Series C SPDs provide a 200 kAIC SCCR, making them suitable for installation at either service entrance or subpanel locations. Models are available in 120 kA, 240 kA per phase and in all WYE and Delta voltage configurations. Weatherproof, compact enclosures allow for installation in virtually any location.

FEATURES

- UL/cUL 1449 5th edition type 1 listed
- I_{max}: 120-240 kA per phase
- Thermally fused metal oxide varistor suppression
- Real-time per phase LED indicators, remote contacts
- Sine wave tracking
- Short circuit current rating (SCCR) 200 kAIC
- Lead length: 40" / #10 AWG
- EMI/RFI noise filtration
- NEMA 4X plastic nipple mount enclosure
- 25 year warranty

OPTIONS

- Flush Mount Cover - Item# VC-FMC

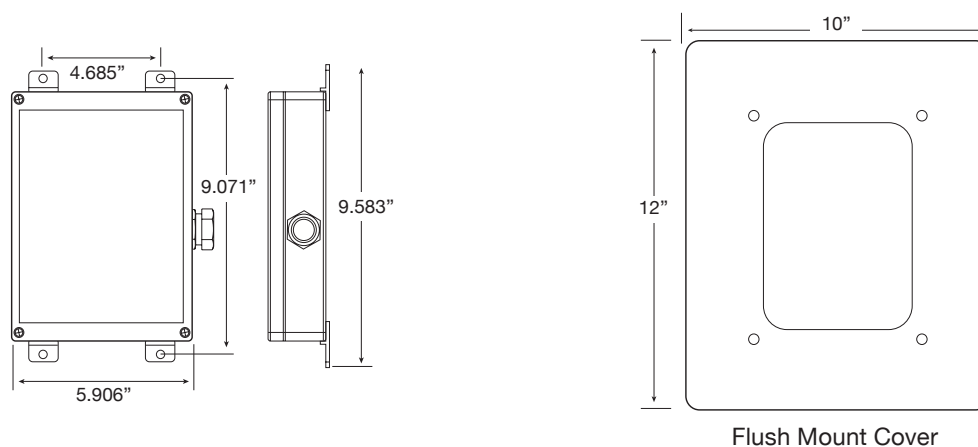


Nipple Mount Version



Flush Mount Version

DIMENSIONS



Flush Mount Cover

PART NUMBER BREAKDOWN

VCx-xxx-4XP-x

- Options Identifier: C= Remote Contacts
- Surge Rating Identifier: 120=120 kA/phase, 240=240 kA/phase
- Voltage Identifier: 1=120/240 single phase, 2=120/208 3-phase Wye, 3=120/120/240 3-phase Hi-Leg Delta, 4=277/480 3-phase Wye, 5=480 3-phase Delta, 6=347/600 3-phase Wye, 8=240/415 3-phase Wye, 9=240 3-phase Delta

SPECIFICATIONS

Description		VC1	VC2	VC3	VC4	VC5	VC6	VC8	VC9
System Voltage	VAC	120/240	120/208	120/120/240	277/480	480	347/600	240/415	240
System Wiring		3W+G (Single Phase)	4W+G (3-Phase Wye)	4W+G (3-Phase Hi-Leg Delta)	4W+G (3-Phase Wye)	3W+G (3-Phase Delta)	4W+G (3-Phase Wye)	4W+G (3-Phase Wye)	3W+G (3-Phase Delta)
Maximum Operating Voltage	MCOV	L - N	150	150	150/320	320	550	320	
		N - G	150	150	150/320	320	550	320	
		L - G	150	150	150	320	550	550	320
		L - L	300	300	300/470	640	550	1100	640
Voltage Protection Rating	VPR	L - N	700	700	700	1,200	1,800	1,200	
		N - G	700	700	700	1,000	1,800	1,000	
		L - G	700	700	700	1,000	1,800	1,800	1,000
		L - L	1,000	1,000	1,800	1,800	3,000	3,000	1,800
Operating Current	Ic		<10 mA	<10 mA	<30 mA	<10 mA	<30 mA	<10 mA	<30 mA
Follow Current	If					None			
Maximum Leakage Current	Ipe					1 mA			
Maximum Fuse Rating						200 A, Class J			
Frequency	f					50/60/400 Hz			
Nominal Discharge Current per Mode	In					20 kA			
Maximum Discharge Current	I _{max}					120 kA - 240 kA per Phase			
Short Circuit Current Rating	SCCR					200 kA			
Standard Compliance						UL 1449 5th Edition Type 1 Listed, cUL Listed			
EMI/RFI Filtering						1283 Electromagnetic Interference Filter (-40 dB)			
Thermal Disconnect						Internal to Each Component			
Overload Disconnect						Internal to Each Device			
Failure Indicators						LED, Remote Signaling Contacts			
Operating Temperature						-40 to +185°F (-40 to +85°C)			
Housing-Enclosure Material						NEMA 4X Polymer			
Mounting Type						Nipple Mount or Wall Mounting by Screws (Not Included)			
Environmental Rating						NEMA 4X, IP65, IP66			
Installation Location						Indoor/Outdoor			

Hurricane 4000 Series

The Hurricane 4000 Series is a high-performance UL 1449 Listed Type 1 SPD designed for critical panels located in the harshest environments. The Hurricane 4000 Series is available for all single and three phase configurations up to 600Vac and is housed in a NEMA 4/12 rated metal enclosure or NEMA 4X stainless steel option.

FEATURES

- UL 1449 5th edition type 1 listed
- I_{max}: 200-400 kA per phase
- Thermally fused metal oxide varistor suppression with gas-tube technology
- Real-time per phase LED indicators, audible alarm, remote contacts
- Smart diagnostic, indicating remaining surge capacity
- Sine wave tracking
- Short circuit current rating (SCCR) 200 kAIC
- Lead length: 36" / #10 AWG
- EMI/RFI noise filtration
- NEMA 4 steel nipple mount enclosure standard
- 25 year warranty



Hardwire Version



Nipple Mount Version

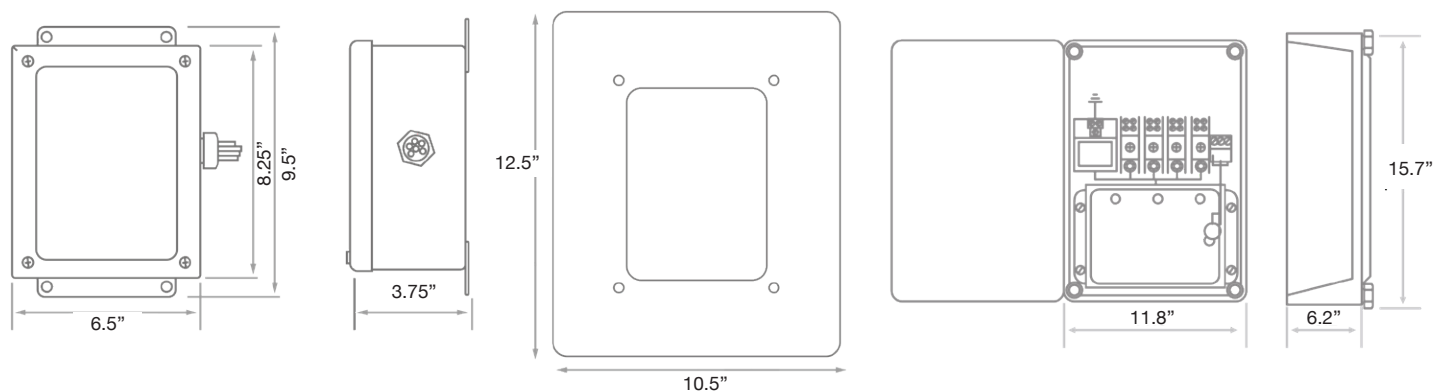


Flush Mount Version

OPTIONS

- Surge counter - available on ALL versions
- NEMA 4X polycarbonate enclosure - hardwire version ONLY
- Integral disconnect (internal or external) - hardwire version ONLY
- NEMA 4X stainless steel - nipple mount version ONLY
- Flush mount cover - nipple mount version ONLY

DIMENSIONS



PART NUMBER BREAKDOWN

HxCx00-xxxT1-x

- **Add on options:** **S**=Surge Counter, **F**=Flush Mount Cover, **I**=Internal Disconnect, **E**=External Disconnect
- **NEMA Rating/Mounting Type:** **04N**=NEMA 4/Nipple, **4XN**=NEMA 4X Stainless/Nipple, **4XH**=NEMA 4X/Polycarbonate/Hardwire
- **Surge Rating Identifier:** **2**=200 kA/phase, **3**=300 kA/phase, **4**=400 kA/phase
- **Voltage Identifier:** **1**=120/240 single phase, **2**=120/208 3-phase Wye, **3**=120/120/240 3-phase Hi-Leg Delta, **4**=277/480 3-phase Wye, **5**=480 3-phase Delta, **6**=347/600 3-phase Wye, **7**=600 3-phase Delta, **8**=220/380 3-phase Wye, **9**=240 3-phase Delta

SPECIFICATIONS

Description		H1Cx00- xxxT1-x	H2Cx00- xxxT1-x	H3Cx00- xxxT1-x	H4Cx00- xxxT1-x	H5Cx00- xxxT1-x	H6Cx00- xxxT1-x	H7Cx00- xxxT1-x	H8Cx00- xxxT1-x	H9Cx00- xxxT1-x
System Voltage	VAC	120/240	120/208	120/120/240	277/480	480	347/600	600	220/380	240
System Wiring		3W+G (Single Phase)	4W+G (3-Phase Wye)	4W+G (3-Phase Hi- Leg Delta)	4W+G (3-Phase Wye)	3W+G (3-Phase Delta)	4W+G (3-Phase Wye)	3W+G (3-Phase Delta)	4W+G (3-Phase Wye)	3W+G (3-Phase Delta)
Maximum Operating Voltage	MCOV (V)	L-N	150	150	150/320	320	550	275	275	275
		N-G	150	150	150	320	550	275	275	275
		L-G	150	150	150/320	320	550	550	750	275
		L-L	300	300	320	550	550	750	750	550
Voltage Protection Rating	VPR (V)	L-N	700	700	700/1,200	1,000	1,800	1,000	1,000	1,000
		N-G	700	700	700/1,200	1,000	1,800	1,000	1,000	1,000
		L-G	700	700	700/1,200	1,000	1,800	1,800	1,800	1,000
		L-L	1,000	1,000	1,000/3,000	1,800	3,000	3,000	3,000	1,800
Operating Current	Ic		<10 mA	<10 mA	<30 mA	<10 mA	<30 mA	<10 mA	<30 mA	<10 mA
Follow Current	If									None
Maximum Leakage Current	Ipe									1 mA
Maximum Recommended Fuse if Any	Rating									200 A, Class J
Frequency	f									50/60/400 Hz
Nominal Discharge Current per Mode	In (8/20 μs)									20 kA
Maximum Discharge Current per Phase	I _{max} (8/20 μs)									200-400 kA (Depending on Model)
Short Circuit Current Rating	SCCR									200 kA
Standard's Compliance or Recognition										UL 1449 5th Edition Type 1 listed, cUL Listed
RFI Filtering										1283 Electromagnetic Interference Filter (-40 dB)
Thermal Disconnecter										Internal to Each Component
Overload Disconnecter										Internal to Each Device
Failure Indicators										LED, Audible Alarm, Remote Signaling & Remaining Life Indicator
Operating Temperature										-40 to +185°F (-40 to +85°C)
Housing-Enclosure Material										Nipple Version: NEMA 4 Steel or NEMA 4X Stainless Steel Hardwire Version: NEMA 4X Polycarbonate
Mounting Type										Nipple Mount or Wall Mounting by Screws (Not Included)
Environmental Rating										IP65
NEMA Rating										NEMA 4/12, NEMA 4X
Installation Location										Indoor/Outdoor

Hurricane 5000 Series

The Hurricane 5000 Modular Series is the culmination of years of technological research and innovation. This Series provides state of the art protection from 200kA to 750kA per phase. Available in all single and three phase voltages configurations. All models available in 7 Mode and 10 Mode configuration with pop out replaceable modules by mode eliminating unnecessary down time and costly repair or replacement.

FEATURES

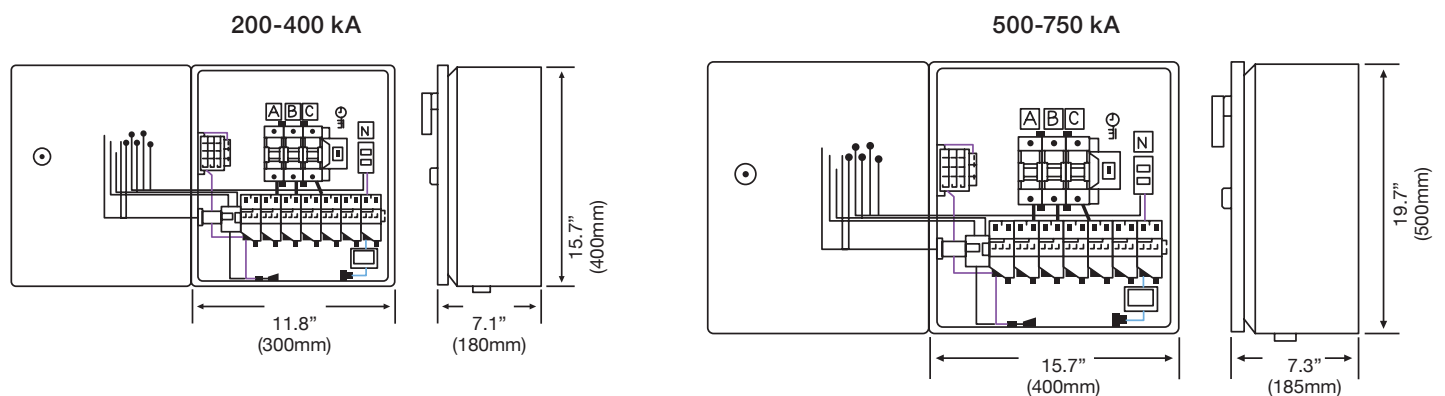
- UL 1449 5th edition type 1 listed
- I_{max}: 200-750 kA per phase
- Thermally fused metal oxide varistor suppression with gas-tube technology
- Real-time LED indicators, audible alarm with silence remote contacts, push to test & surge counter with reset
- Sine wave tracking
- Short circuit current rating (SCCR) 200 kAIC
- EMI/RFI noise filtration
- Field replaceable modules
- Available in 7 and 10 mode configurations
- NEMA 4 steel enclosure standard
- 10 year product warranty

OPTIONS

- NEMA 4X polycarbonate enclosure
- Integral disconnect
- NEMA 4X stainless steel
- 15 & 25 year warranty upgrade available on all versions



DIMENSIONS



PART NUMBER BREAKDOWN

HxCx00-xxx-xM-x

- **Add on options:** I=Internal Disconnect, E=External Disconnect
- **Protection Modes:** A=All-Mode (10 mode), **Leave Blank**=7 Mode
- **NEMA Rating:** 04H=NEMA 4, 4XS=NEMA 4X Stainless, 4XP=NEMA 4X Polycarbonate
- **Surge Rating Identifier:** 2=200 kA/phase, 3=300 kA/phase, 4=400 kA/phase, 5=500 kA/phase, 7=750 kA/phase
- **Voltage Identifier:** 1=120/240 single phase, 2=120/208 3-phase Wye, 3=120/120/240 3-phase Hi-Leg Delta, 4=277/480 3-phase Wye, 5=480 3-phase Delta, 6=347/600 3-phase Wye, 7=600 3-phase Delta, 8=240/415 3-phase Wye, 9=240 3-phase Delta

SPECIFICATIONS

Description		H1Cx00-xxx-xM-x	H2Cx00-xxx-xM-x	H3Cx00-xxx-xM-x	H4Cx00-xxx-xM-x	H5Cx00-xxx-xM-x	H6Cx00-xxx-xM-x	H7Cx00-xxx-xM-x	H8Cx00-xxx-xM-x	H9Cx00-xxx-xM-x	
System Voltage	VAC	120/240	120/208	120/120/240	277/480	480	347/600	600	220/380	240	
System Wiring		3W+G (Single Phase)	4W+G (3-Phase Wye)	4W+G (3-Phase Hi-Leg Delta)	4W+G (3-Phase Wye)	3W+G (3-Phase Delta)	4W+G (3-Phase Wye)	3W+G (3-Phase Delta)	4W+G (3-Phase Wye)	3W+G (3-Phase Delta)	
Maximum Operating Voltage	MCOV (V)	L-N	150	150	150/320	320		550		275	
		N-G	150	150	150	320		550		275	
		L-G	150	150	150/320	320	550	550	750	275	275
		L-L	300	300	320	550	550	750	750	550	275
Voltage Protection Rating	VPR (V)	L-N	800	800	800/1,200	1,200		1,800		1,200	
		N-G	800	800	800/1,200	1,200		1,800		1,200	
		L-G	900	900	800/1,200	1,500	1,800	1,800	2,000	1,500	1,200
		L-L	1,800	1,800	1,800	2,000	3,000	3,000	2,000	2,000	2,000
Operating Current	Ic	<10 mA	<10 mA	<30 mA	<10 mA	<30 mA	<10 mA	<30 mA	<10 mA	<30 mA	
Follow Current	If					None					
Maximum Leakage Current	Ipe					1 mA					
Maximum Recommended Fuse if any	Rating					200 A					
Frequency	f					50/60/400 Hz					
Nominal Discharge Current per Mode	In (8/20 μs)					20 kA					
Maximum Discharge Current per Phase	I _{max} (8/20 μs)					200-750 kA (Depending on Model)					
Short Circuit Current Rating	SCCR					200 kA					
Standard's Compliance or Recognition						UL 1449 5th Edition Type 1 Listed, cUL Listed					
RFI Filtering						1283 Electromagnetic Interference Filter (-40 dB)					
Thermal Disconnecter						Internal to Each Component					
Overload Disconnecter						Internal to Each Device					
Failure Indicators						LED, Audible Alarm with Silence & Remote Signaling					
Operating Temperature						-40 to +185°F (-40 to +85°C)					
Housing-Enclosure Material						NEMA 4 Steel, NEMA 4X Stainless Steel or NEMA 4X Polycarbonate					
Mounting Type						Wall Mounting by Screws (Not Included)					
Environmental Rating						IP65					
NEMA Rating						NEMA 4/12, NEMA 4X					
Installation Location						Indoor/Outdoor					

KGSP-1 Control Wire Surge Protection

This device provides 25,000 surge amps of protection per mode for 120 volt lines to control board and 12 volt DC (+) / (-) lines potential neutral to ground transients. The diagnostic LED indicated all modes of surge protection are functioning.

FEATURES

- Protects generator control circuits from damaging electrical surges and transients
- Protects utility sense lines
- Protects utility 120 volt charge circuit
- Protects neutral line
- Protects 12 volt DC line (+)
- Protects 12 volt DC line (-)
- Protects transfer signal control lines
- Diagnostic LED monitors protection
- Meets 8/20 kA 1449 5th edition
- Warranty: 5 years from installation date



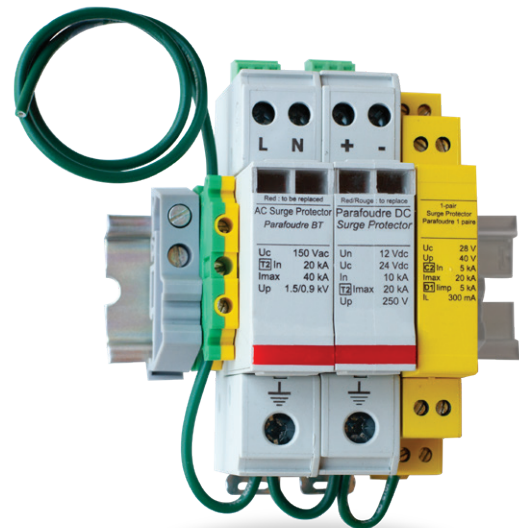
Generator Control Circuit
Surge Protector

KSP-3DRM

This device provides 40,000 surge amps of protection per mode for 120 volt AC lines to control board and 12 volt DC lines potential neutral to ground transients. The diagnostic windows indicate all modes of surge protection are functioning.

FEATURES

- Protects generator control circuits from damaging electrical surges and transients
- Protects utility 120 volt charge circuit
- Protects neutral line
- Protects 12 volt DC line (+)
- Protects 12 volt DC line (-)
- Protects RS485 data line
- Diagnostic window monitors and confirms surge protection
- Warranty: 5 years from installation date



12 VDC/AC Charge/Dataline
Circuit Surge Protector

Din Rail AC Surge Protection



- AC DIN rail products
- Available from 40,000 to 200,000 surge amp capacity
- Dry contacts and visual indicators available on all products
- Noise filtration assemblies available in all voltages

Din Rail DC Surge Protection



- DC surge protection from 12 to 350 volts DC
- These devices are based on high energy varistors (MOV) matched with the DC operating voltage (from 12 to 350 Vdc). The MOV are equipped with internal thermal disconnectors in order to provide safe end of life.

Din Rail In-Line Data Surge Devices



- 2 and 4 pair series DIN rail surge protection for telephone ADSL/SDSL/HDSL, ISDN, Fipway, Fieldbus-H2, 4-20mA, RS232 & RS485, MIC/T2 10BaseT Products
- Available from 6 to 150 DC voltage. 20,000 surge amp capacity
- Pop out field replaceable modules

CCTV & Cable Protection



- The P8AX series coaxial surge protectors have been designed to protect antennas, microwaves, broadband applications, two-way radios, cellular, GPS and CATV equipment against lightning surges and electrical transients
- A first line of defense for your sensitive equipment
- Available in a broad selection of connector types

Two/Four Pair Data Line Protector



- B180/480 series are wall mount DC signal line surge protectors designed to protect your sensitive telephone, data com and instrumentation equipment against harmful lightning surges and electrical transients

RJ45/RJ45 POE Surge Protector Module



- The MJ8/MJ8POE series is designed to protect sensitive data-monitoring equipment connected to various network protocols from transient over voltages
- The transient protection circuit is based on high energy gas discharge tubes (GDT) and a network of fast response silicon avalanche diodes (SAD) to achieve sharp clamping of very large surge events

Type 1 PV Surge Protectors 1CA DC



- Photovoltaic Surge Protectors 500 to 1000 volts DC with 40,000 amps I_{max}
- Type 1 UL 1CA DC SPD with high energy MOV's, I_{max} 40 kA modular design with UL 1449 5th edition listing
- Available in 500, 600, 800 and 1000 volts DC configurations
- Din rail mountable

Marine Plug Strip

- Commercial grade plug strip
- 6 plug, NEMA 515 outlet
- Complies with CID # A-A-50622
- 15 amp capacity
- UL listed





PSP Generator Load Shedding

Cutting edge, innovative, and next generation are all terms that have been used to describe PSP Products' generator load management systems.

PSP is the industry leader in load management systems. Some of our "Industry Firsts" include magnetic latching relays instead of contactors up to 600 amps to eliminate hum and chatter, and wireless load management up to 200 amps.

SAK-60

Proprietary, adaptable generator detection and under frequency circuitry for precision WIRELESS load dropping and load management functions.

FEATURES

- NO/NC dry-contact control input
- Time delay on function
- User adjustable startup delay and under frequency restoration timers provide a unlimited number of devices with custom priority settings
- Adjustable frequency drop out settings and delay times for under frequency detection
- Precision adjustments from 50.0 to 59.9 Hz for frequency and from 00.1 to 10.9 seconds delay before load shed
- Nuisance load detection locks out load for an adjustable, extended period of time whenever a restored load immediately overloads a generator
- Installs inline with 120 or 240 AC volt connected load
- Relay is self powered from Line IN voltage. No external power supply needed
- Switches at zero cross over point for maximum life expectancy
- Can be installed as a standalone hardwired 60 amp latching relay with dry-contact control inputs
- Can be installed as a 60 amp time delay relay up to 9999 seconds
- Can be used as a 60 amp over / under voltage protection relay with brownout and short cycle protection
- No computer or programming tool required. All adjustments are performed in minute with three buttons using the LCD display
- Compact size: only 3.25 X 4.75"
- Snap on finger guards for wiring accepts wire size up to a 3AWG
- UL Listed - File# E515902



ALL-IN-ONE 60 AMP Wireless 2-Pole Latching Relay



Multiple Loads in One Enclosure for Easy and Clean Installation

SAK-60-C

Optional enclosure available

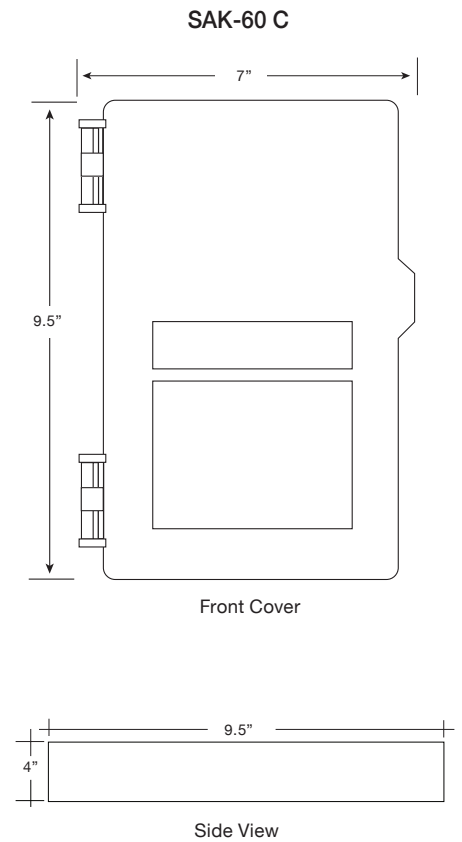
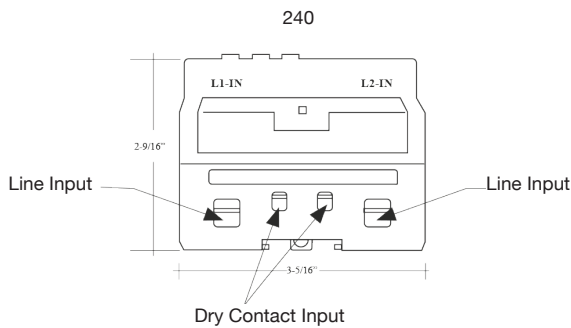
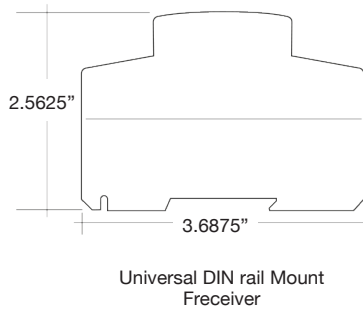
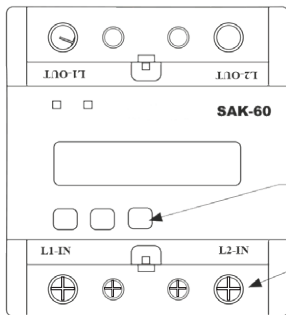
FEATURES

- NEMA 3R enclosure
- Fully assembled
- Ready to mount and wire
- Double latching door locks



SAK-60 C

DIMENSIONS



SAK-60MS

Designed for new installation of electric vehicle chargers (EVC) and other load management / peak shaving applications.

Allows loads up to 60 amps to be added to any main service panel or sub panel that is at risk of overload, or will become overloaded, when a new load is introduced. The onboard intelligent micro-controller monitors the load on the existing panel and only allows the added load access to the panel when capacity is available. Installation requires open breaker.

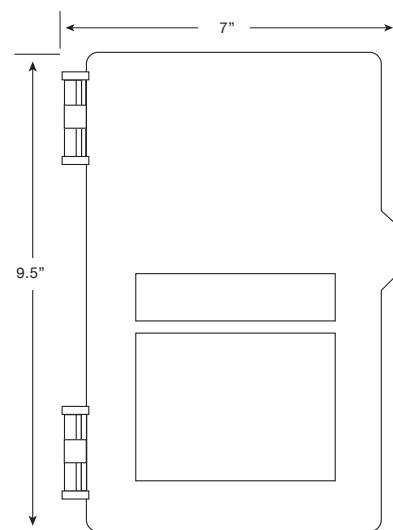
FEATURES

- Can be installed on any main or sub panel up to 1,000 amps to add managed loads up to 60 amps continuous.
- Adapts to any application using the precision field adjustable set points. These maximize access to the added load and prevent looping.
- Field adjustable set points include: panel overload amperage, overload inrush cutoff delay, restore amperage threshold, load restore delay time and line-loss compensation adjustment for CTs. Controller LCD displays actual real-time amperage on panel.
- Prevents overloading and saves costly upgrades to panel and / or electrical infrastructure.
- Controller is self-powered from line in voltage. External power supply not required. Can control 120 VAC single pole or 208-240 VAC double pole circuits.
- Utilizes a magnetic latching relay for long-term reliability, and box-lug in and out terminals for ease of installation.
- Split core CTs available in 100 amp, 250 amp, 500 amp and 1,000 amp ratings.
- Comes standard in polycarbonate 3R enclosure. Available in NEMA 01, 03, 04 steel and stainless steel enclosures.
- UL Listed - File# E515902

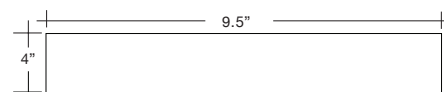


SAK-60MS

DIMENSIONS



Front Cover



Side View

The SAK-24 provides a wireless solution to control loads of both normally open and normally closed devices with a dual form “C” dry contact. The contacts are rated for up to 5 amps and 250 volts AC to control a broad range of applications. The SAK-24 is powered by 24 volts AC that can be derived from anywhere within the electrical system. A connection or control wire back to the generator or transfer switch is not required.

When a power outage occurs and power is restored, the SAK-24 will energize the relays and begin to analyze the AC power from the input. When utility power is detected the SAK-24 will de-energize the relay after 2-5 minutes and enter into a sleep mode until the next outage occurs. When generator voltage is detected the relay will remain energized and the SAK-24 will continue to monitor the AC line waveform.

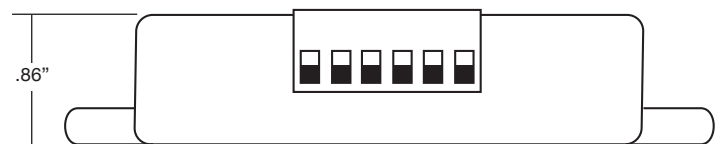
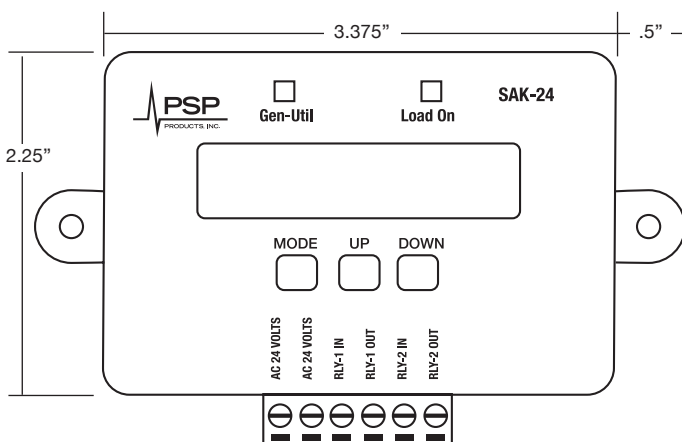


Low Voltage Wireless Generator Load Drop

FEATURES

- NO/NC dry-contact control input
- Wireless technology drops load when generator power is detected
- No control wires needed from the transfer switch
- Can be installed anywhere in the electrical system
- 2 control dry contacts
- Mounting flanges for surface mount installation
- Quick connect SAK-24 terminal blocks
- Time delay on function
- User adjustable startup delay and under frequency restoration timers provide a unlimited number of devices with custom priority settings
- Adjustable frequency drop out settings and delay times for under frequency detection
- Precision adjustments from 50.0 to 59.9 Hz for frequency and from 00.1 to 10.9 seconds delay before load shedding
- Nuisance load detection locks out load for an adjustable extended period of time whenever a restored load immediately overloads a generator
- Switches at zero cross over point for maximum life expectancy
- All adjustments are performed in minute with three buttons using the LCD display
- Compact size only 3.375" X 2.25"

DIMENSIONS

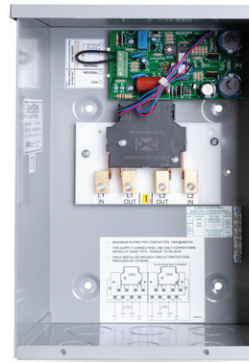


Residential / Commercial 100 & 200 Amp Single and Three Phase Magnetic Latching Relays

Allows to load manage or load drop 100 and 200 amps individual loads with or without a control board in transfer switch.

FEATURES

- **LOAD MANAGEMENT** - Universal relays work with ANY generator, transfer switch or control circuit to manage loads
- **LOAD DROPPING** - Automatically removes loads when utility power is lost, and reconnects loads after a 5 minute delay when utility power is restored and needs no control board
- Utilizes magnetic latching relays, eliminating the normal humming, chattering and heat associated with contactors.
- 100 amp available in a 1, 2, 3 or 4 relay configuration (2, 3 & 4 relay configuration - LOAD DROPPING ONLY)
- Standard NEMA 3R enclosures, and also available in NEMA 1 and stainless steel
- 5 year warranty on magnetic latching relays



LS101X1BX



LS201X1BX



LS102X1BX



LS202X1BX

SPECIFICATIONS

Electrical	100 Amp	200 Amp	100 Amp	200 Amp
Rated Load at 277 Volts	120 Amps	200 Amps	120 Amps	200 Amps
Max. Continuous Operating AC Voltage	440 Volts	440 Volts	440 Volts	440 Volts
Insulation Resistance	1,000 M Ω (at 500 VDC)	1,000 M Ω (at 500 VDC)	1,000 M Ω (at 500 VDC)	1,000 M Ω (at 500 VDC)
Dielectric Strength				
Coil to Contact	4,000 VAC for 1 Minute	4,000 VAC for 1 Minute	4,000 VAC for 1 Minute	4,000 VAC for 1 Minute
Across Open Contacts	2,500 VAC for 1 Minute	2,500 VAC for 1 Minute	2,500 VAC for 1 Minute	2,500 VAC for 1 Minute
Max. Switching Current	120 Amps	240 Amps	120 Amps	240 Amps
Max. Switching Power	27,700 VA	55,700 VA	27,700 VA	55,700 VA
Mechanical				
Connection Terminal	Mechanical Lugs	Mechanical Lugs	Mechanical Lugs	Mechanical Lugs
Operation Temperature (°C)	-40 to +85	-40 to +85	-40 to +85	-40 to +85
Enclosure Type	NEMA 1, 3R, 4	NEMA 1, 3R, 4	NEMA 3R	NEMA 3R
Control Input	120 VAC, 24 VAC or Dry Contacts	120 VAC, 24 VAC or Dry Contacts	120 VAC, 24 VAC or Dry Contacts	120 VAC, 24 VAC or Dry Contacts
Part #	LS101X1BX	LS201X1BX	LS102X1BX	LS202X1BX

Residential / Commercial 100 & 200 Amp Single and Three Phase WIRELESS Magnetic Latching Relays

The BX-W2 control board is a combination of multiple load shedding functions combined into a single device. Available with 100 amp or 200 amp latching relays. It is perfect to handle subpanels, pool panels, 200 amp panels on opposite sides of the home from the transfer switch. Wireless load lock-out with most generators & wireless under-frequency load management with any air cooled generators. Relay can also be controlled by dry-contact input.

FEATURES

- Wireless under frequency load management (air-cooled generators only)
- Wireless generator load lock-out
- Priority settings 1-4
- Also dry contact input
- Utilizes magnetic latching relays, eliminating the normal humming, chattering and heat associated with contactors
- Assembled in NEMA 3R enclosure
- Optional stainless steel and flush mount enclosures available
- 5 year warranty on magnetic latching relays
- UL listed 508A control panel



LS101X1BX-W2



LS102X1BX-W2

SPECIFICATIONS

Electrical	100 Amp	200 Amp	100 Amp
Rated load at 277 Volts	120 Amps	240 Amps	120 Amps
Max. Continuous Operating AC Voltage	440 Volts	440 Volts	440 Volts
Insulation Resistance	1,000 MΩ (at 500 VDC)	1,000 MΩ (at 500 VDC)	1,000 MΩ (at 500 VDC)
Dielectric Strength			
Coil to Contact	4,000 VAC for 1 Minute	4,000 VAC for 1 Minute	4,000 VAC for 1 Minute
Across Open Contacts	2,500 VAC for 1 Minute	2,500 VAC for 1 Minute	2,500 VAC for 1 Minute
Max. Switching Current	120 Amps	240 Amps	120 Amps
Max. Switching Power	27,700 VA	55,700 VA	27,700 VA
UL 508 A			
Ith	160 Amps	240 Amps	160 Amps
Max. Horsepower at 240 Volts AC Single Phase	15 HP	30 HP	15 HP
IEC-60947			
AC1 Load	150 Amps	300 Amps	150 Amps
AC2 Load 200-240 Volts	30 kW/105 Amps	60 kW/210 Amps	30 kW/105 Amps
Mechanical			
Connection Terminal	Mechanical Lugs	Mechanical Lugs	Mechanical Lugs
Operation Temperature (°C)	-40 to +85	-40 to +85	-40 to +85
Enclosure Type	NEMA 1, 3R, 4	NEMA 1, 3R, 4	NEMA 1, 3R, 4
Part #	LS101X1BX-W2	LS201X1BX-W2	LS102X1BX-W2

Universal Load Shedding Panel with Integrated Load Logic Controller

The CX Series load management panel with latching relays is a universal load shedding system that works with ANY generator or transfer switch in managing 2-4 circuits from 20 to 100 amps each and up to 2 HVAC systems using low voltage circuits.

FEATURES

- Universal load shedding system works with ANY generator or transfer switch in managing 2-4 circuits from 20 to 100 amps each and up to 2 HVAC systems using low voltage circuits
- Field programmable using installer programming tool
- Utilizes CT inputs for precision load management and to reduce the possibility of overloading generators
- Program adjustments include: generator available amperage, start up delay, amperage of each load
- Utilizes magnetic latching relays eliminating the normal humming, chattering and heat associated with contactors
- Available in a variety of enclosure configurations including NEMA 1, NEMA 3R and stainless steel
- Compact flush mount version fits inside of studs and optional flush mount cover extends .75" past edge of can on all 4 sides for finished walls
- 5 year warranty on magnetic latching relays

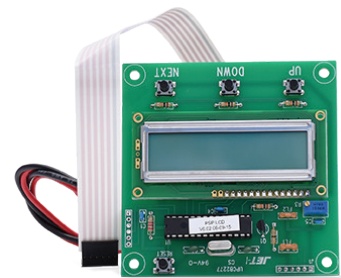
SPECIFICATIONS

Electrical	
Rated Load at 277 Volts	120 Amps
Maximum Continuous Operating AC Voltage	480 Volts
Insulation Resistance	1,000 MΩ (at 500 VDC)
Dielectric Strength	
Coil to Contact	4,000 VAC for 1 Minute
Across Open Contacts	2,500 VAC for 1 Minute
Maximum Switching Current	120 Amps
Maximum Switching Power	27,700 VA
Insulation Resistance	1,000 MΩ
UL 508 A	
Ith	160 Amps
Maximum Horsepower at 240 VAC Single Phase	15 HP
IEC-60947	
AC1 Load	150 Amps
AC3 Load 200-240 Volts	30 KW / 105 Amps
Mechanical	
Connection Terminal	Mechanical Lugs
Operation Temperature (°C)	-40°C to +85°C
Enclosure Type	NEMA 01, 03R, 04
Control Input	120 VAC, 24 VAC or Dry Contacts



LS10114CX
(4) 100 Amp
Circuit

LS10112CX
(2) 100 Amp
Circuit



Easy-to-Use 3 Button
Programming Module with
LCD display



Includes Dual CT's for Precision
Load Shedding Control

Universal Stand Alone Load Shedding Controllers

Stand alone 4 – 8 & 12 channel load shedding controllers. NO or NC dry contacts control low voltage circuits, relays and/or contactors for universal application. Single and three phase applications. Monitors generator load with CT inputs. Works with any size generator or transfer switch.

FEATURES

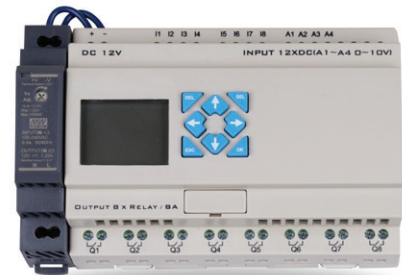
- Robust programming features allow for customization to meet almost any application
- Uses current transformers to read the generator's actual current and accurately manage loads to prevent overloading, CTs sold separately
- Field programmable with front panel controls, no laptop or programming tool required
- Works with any size of generator or transfer switch
- Available in single and three phase models
- Available in 4, 8, and 12 load configurations
- Each load can be independently controlled or locked out
- Small DIN rail mount footprint allows for installation in most transfer switches
- Easy-to-use, entire program can be set up in 5 minutes or less

SPECIFICATIONS

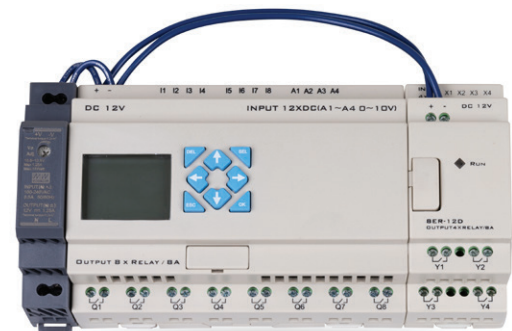
Input Voltage	120 VAC with 24 VDC Power Supply
Number of control relays	LSC-04=4, LSC-08=8, LSC-08+04X=12
Display	4 Line, 16 Character LCD
Program interface	8 Programming Keys
Memory Type	Retentive Flash Memory
Analog Inputs	10-bit, 0-10 VDC
Terminal Wire Size	26-16 Gauge Wire
Control Relay	SPST 8 Amp Resistive Load
Operation Temperature (°C)	-40 to +85
Module Mounting	DIN rail
Agency Approvals	cUL, CE, UL



LSC-04
4 Load Controller Single Phase



LSC-08
8 Load Controller
Single or Three Phase



LSC-12
12 Load Controller
Single or Three Phase

Open Frame Relay Load Shedding Enclosures

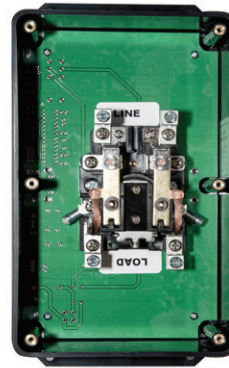
Relays available individually or as pre-assembled enclosures with (1), (2), (3) or (4) 50 amp normally closed relay(s)

FEATURES

- Normally closed and normally open contacts for universal application
- Available with one, two, three or four relays with termination blocks and grounding bars
- Box Lug termination
- Small footprint, standard open frame configuration
- UL and CUL listed to 508 A standard as an assembly
- Available as an individual component or mounted in NEMA 1 or 3R enclosures with grounding bar
- Low profile allows for flush mounting in standard 2x4" stud wall with optional flush mount cover for 1/2/3 relay versions
- NEMA 3R available (LS051X4EX is stocked in both NEMA 1 and NEMA 3R versions)

SPECIFICATIONS

Pole Configuration	DPDT Silver Alloy
Maximum Switching Voltage	250 Volts AC, 30 Volts
Operating Voltage	80% Rated Voltage
Maximum Voltage	110% Rated Voltage
Contact Resistance	<100 MΩ
Operate Voltage (25 °C)	80% Rated Voltage
Release Voltage (25 °C)	30% Rated Voltage
Operating Temperature (°C)	-25 to +55
Normal Coil Power	10
Dielectric Strength	2500 VAC/1 Minute Leakage Current 1 mA
Terminal Connections	CU Rated Box Lug Terminals
Coil Connections	Screw Terminal
Operation Temperature (°C)	-40 to +85
Listings	UL/CUL



LS051X1EX
08x05x03 NEMA 1



LS051X2EX
10x10x04 NEMA 1



LS051X3EX
12x12x04 NEMA 1



LS051X4EX
15x15x04 NEMA 1

Latching Relay Panels for Kohler®, Generac® and Cummins® Load Shedding Controllers

This ultra compact magnetic latching relay allows you to connect directly to any Kohler®, Generac® or Cummins® load shedding module – including the new Generac® low voltage board – to control 4 circuits from 20 to 100 amps each.

FEATURES

- Directly connects to any Kohler®, Generac® or Cummins® load shedding module - even the new Generac® low voltage board – to control circuits from 20 to 100 amps each
- Utilizes magnetic latching relays, eliminating the normal humming, chattering and heat associated with contactors
- Available in NEMA 01, NEMA 3R and stainless steel
- Available in 2 and 4 relay configurations
- Compact flush mount version fits inside of studs and optional flush mount cover extends 3/4” past edge of can on all 4 sides for finished walls
- 5 year warranty on magnetic latching relays



LS101X4LX

SPECIFICATIONS

Electrical	
Rated Load at 277 Volts	120 Amps
Maximum Continuous Operating AC Voltage	480 Volts
Insulation Resistance	1,000 MΩ (at 500 VDC)
Dielectric Strength	
Coil to Contact	4,000 VAC for 1 Minute
Across Open Contacts	2,500 VAC for 1 Minute
Maximum Switching Current	120 Amps
Maximum Switching Power	27,700 VA
Insulation Resistance	1,000 MΩ
UL 508 A	
Ith	160 Amps
Maximum Horsepower at 240 VAC Single Phase	15 HP
IEC-60947	
AC1 Load	150 Amps
AC3 Load 200-240 Volts	30 KW / 105 Amps
Mechanical	
Connection Terminal	Mechanical Lugs
Operation Temperature (°C)	-40°C to +85°C
Enclosure Type	NEMA 01, 03R, 04
Control Input	120 VAC, 24 VAC or Dry Contacts

Modular Contactor Panel 50-225 Amps Circuits

Allows 200 amp service rated switch on smaller generators to meet National Electric Code.

FEATURES

- UL listed & IEC-60947
- 50, 65, 100, 125, 180 and 225 amp contactor modules
- Any combination of 1- 8 contactor modules
- Surface and flush mount enclosures
- Heavy duty industrial grade contactors
- Universal load shedding contactors work with all Generac transfer switches with load controllers (even new low voltage board)
- Provides load shedding capabilities for double pole circuits with 15-225 amps breakers/loads
- Reduces installation time and space requirements and assists in meeting the new NEC codes
- DIN rail mounting allows for fast and easy customization for any configuration required
- Available in a variety of enclosure configurations including NEMA 1 and NEMA 3R
- Compact flush mount version fits inside of studs and the optional flush cover extends 3/4" past edge of can on all 4 sides for finished walls.



10x10X4 NEMA01



20X14X4 NEMA01



12x12x04 NEMA01

SPECIFICATIONS

Electrical	50 Amp Relay	65 Amp Relay	100 Amp Relay
Wire	CU Wire Only	CU Wire Only	CU Wire Only
Connection Terminal	Mechanical Lugs	Mechanical Lugs	Crimp Lugs
Contactors Coil Voltage	120 Volts AC	120 Volts AC	120 Volts AC
Short Circuit	5Ka RMS Sym 600 V Max	5Ka RMS Sym 600 V Max	10Ka RMS Sym 600 V Max
Operation Temperature (°C):	-40°C to +85°C	-40°C to +85°C	-40°C to +85°C
Contactors Mounting	DIN rail	DIN rail	DIN rail
Warranty	12 Months	12 Months	12 Months
UL 508 A			
Ith	Ith 60 Amps	100 Amps	135 Amps
Maximum Horsepower at 240 VAC Single Phase	7.5 Horsepower	10 Horsepower	15 Horsepower

Dimensions	NEMA 01	NEMA 3R	F.M Option	50 Amp Cont	65 Amp Cont	100 Amp Cont
8x8x04	Yes	No	Yes	1	X	X
12x08x06	No	Yes	No	2	1	1
12x12x04	Yes	No	Yes	4	X	X
12x12x06	Yes	Yes	Yes	4	3	3
16x16x04	Yes	No	No	6	X	X
16x16x6	No	Yes	No	6	4	4
20x14x04	Yes	No	Yes	6	2	2
20x14x06	No	Yes	No	6	4	4

Part Number	Part Number Three Pole Contactors with DIN rail Mounting Receiver
LSC-50	50 Amp Normally Open Contactor with DIN rail Receiver (24 or 120 Volt Coil)
LSC-65	65 Amp Normally Open Contactor with DIN rail Receiver (24, 120, 240 Volt Coil)
LSC-100	100 Amp Normally Open Contactor with DIN rail Receiver (24, 120, 240 Volt Coil)

KTSE-1

Allows you to put multiple RXT switches together on the same Utility Entrance Panel for 400/600/800 and 1,000 amp residential services. Daisy Chain up to five RXT transfer switches at a time and eliminate the need for an RDT switch as slave switch.

FEATURES

- Daisy chain RXT transfer switches
- Eliminates need for RDT switch as slave switch
- Simple four wire hook-up. No cutting or splicing required
- Transfer switch control board plug, connects directly into the RXT expander
- Packaged complete with all necessary components for a successful installation
- LED Indicator confirms utility or transfer mode
- Maintenance free, requires no batteries or adjustments
- Small footprint that easily installs in transfer switch enclosure where control board was located
- One unit required for each slave switch being installed
- For 3 phase applications see KTSE-3



120/240VAC Single-Phase

KTSE-3

Three phase Kohler RXT transfer switch expander. 120/208 VAC 200 amps or less.

FEATURES

- Daisy chain RXT transfer switches
- Allows use of cost-effective RXT switches for three-phase application
- Transfer switch control board plug, connects directly into the RXT expander
- Packaged complete with all necessary components for a successful installation
- LED Indicator confirms utility or transfer mode
- Maintenance free, requires no batteries or adjustments
- Small footprint that easily installs in transfer switch enclosure where control board was located
- One unit required for each slave switch being installed



120/208VAC (100-200 Amp
Three-Phase RXT Models Only)

Kohler RXT Transfer Switch Conversion to 2 Wire Start

The KTWS-1 converts a Kohler RXT into a 2-wire start transfer switch. The interface provides the necessary voltage sensing, timing functions and switching circuits required for automatic operation. This allows a 2-wire start generator to be installed without having to change the transfer switch or wiring between the transfer switch and generator.



KTWS-1

FEATURES

- Works with Kohler® RXT® transfer switches
- Converts from R-bus connections to 2-wire start
- Connects to any 2-wire start generator
- Optional weekly exercise timer option (DTS-1)
- Utility loss timer selectable 5 sec. or 30 sec.
- Generator cool-down selectable 10 sec., 300 sec., or 600 sec.
- Utility return transfer timer selectable between 30 sec., 120 sec., or 600 sec.
- LED Indicator confirms utility or transfer mode
- Connects to factory P-13 connector for easy installation
- 2 year warranty

HOW IT WORKS

When utility power fails, the KTWS-1 will pause for 5 seconds to ensure an actual power outage has occurred. The KTWS-1 will then initiate a 2-wire generator start signal, starting up the generator. After a 15 second warm-up period the KTWS-1 will confirm the generator voltage is within acceptable levels and will then output the generator transfer signal.

When utility power is restored and remains stable for more than 2 minutes the controller will automatically transfer the load back to utility and signal the generator to turn off after cool down period.

Generac®/Briggs & Stratton® Transfer Switch Conversion to 2 Wire Start

The KGC-1 converts a 240 volt sensing transfer switch to a 2 wire start transfer switch.

The interface provides the necessary voltage sensing and switching circuits required for automatic operation. This allows a 2 wire start generator to be installed without having to change the transfer switch or wiring between the transfer switch and generator.



KGC-1

FEATURES

- Works with Generac® and Briggs & Stratton® transfer switches
- Connects to any 2-wire start generator
- Optional weekly exercise timer option (DTS-1)
- Utility loss timer selectable 5 sec. or 30 sec.
- Generator cool-down selectable 10 sec., 300 sec., or 600 sec.
- Utility return transfer timer selectable between 30 sec., 120 sec., or 600 sec.
- LED Indicator confirms utility or transfer mode
- 2 year warranty

HOW IT WORKS

When utility power fails, the KGC-1 will pause for 5 seconds to ensure an actual power outage has occurred. The KGC-1 will then initiate a 2 wire generator start signal, starting up the generator. After a 15 second warm up period the KGC-1 will confirm generator voltage is within acceptable levels and will then output the generator transfer signal.

When utility power is restored and remains stable for more than 2 minutes the controller will automatically transfer the load back to utility and signals the generator to turn off after cool down.

PSP Products Inc. has served the industrial, commercial, utility and residential markets for over 25 years by providing superior products and services. From our humble beginnings in the office products industry, we have evolved into a forward-thinking company offering innovative products to meet the demand of an ever changing-market.

We strongly believe that our customer is our most valuable asset. Unlike many of our larger competitors, we believe in working for our customers and conforming to meet their needs, not ours. We stand ready to assist in any way possible, supporting our customers through challenges and unique/urgent requirements they may encounter.



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